Quality Teaching - How to Organize Your Teaching

Professional Development Lesson

Teaching Strategies

Classroom Connections are items or activities that can be immediately implemented in classrooms and are noted by CC*

Materials Needed	Pencils, paper, white board markers, sticky notes, chart paper, markers

Step	*Description*	*Time*	*Target Audience*
Introduction	Use Slides 1-4 Handout #1	3-5 min	All
Visual Diagram	Slide 5 Handout #2	1 min	All
View: Video Multimedia Overview: How to Organize Your Teaching	Slide 6: Use this multimedia overview showing research-based strategies to improve students' memory, strengthen problem solving skills, and build conceptual understanding.	4:33 min	All
Discussion	Slide 6: impact organized or disorganized has on the learning	2 min	*All*
Preview:	Slide 7: Key Concepts in Organizing Instruction and Study	1 min	All
View: Expert Interview "Key Concepts in Organizing Instruction and Study"	Slide 8: Dr. Pashler as he describes how research in cognitive psychology can help us understand and address common problems in teaching and learning.	7:45 min	All
Share	Slide 8: Recall a student or teaching situation when you feel one of these concepts may have benefitted.	2 min	All
"Spacing Learning Over Time with Review and Quizzing" 1st recommended practice			
Step	*Description*	*Time*	*Target Audience*
Preview	Slide 9: 1st recommended practice Spacing Learning Over Time with Review and Quizzing	1 min	All
Introduce Using Cloze Reading	Slide 10: Introduce the key concepts from the Spacing Learning over Time	2 min	All
View: Multimedia Overview Spacing Learning Over Time With Review and Quizzing	Slide 11: Research studies have found that spacing learning over time can improve students' retention of important course content. Handout #3 & Handout #4 *CC	4:49 min	All

Share & Discuss	Slide 11: Use of pacing chart	5 min	All
View: Expert Interview Key Concepts in Spacing Learning Over Time	Slide 12: Re-exposing students to material over the course of weeks and months to mitigate the problem of forgetting. Handout #4	6:21 min	All
Compare	Slide 12: Compare to see if you found the ideal time	1 min	All
Read	Slide 13: 1st key concept: Use quizzes and fun games for retrieval practice to reduce forgetting	2 min	All
Read	Slide 14: 2nd key concept: Teach students how to test and assess their own knowledge and focus their study strategies accordingly	2 min	All
Read	Slide 15: 3rd key concept: Use technology to provide quick-response quizzes.	2 min	All
Read	Slide 16: 4th key concept: Plan for important content to be revisited and reviewed over time.	2 min	All
Read	Slide 17: 5th key concept: Provide common planning time for teachers to revise grading systems that capture review and students' mastery of skills over time rather than a student's performance on a single assessment.	2 min	All
View: Expert Interview "Using Quizzes to Boost Achievement"	Slide 18: Mark McDaniel, Ph.D. shows how quizzes can be seen as tools for learning, not just assessment.	6:18 min	All
Brainstorm	Slide 18: Small groups ways to use quizzes	5 min	All
View: Slide show: Quick Quizzes as Learning Tools	Slide 19: Watch a series of presentations starting with Charles Willems, Mike Comiskey, Matt Forbes showing how to use quick quizzes as learning tools	6:45 min	All
Share	Slide 19: Handout #5 – clock partner – share ideas to organize scores Handout #6 & 6B Progress Monitor Tracking Chart for Reading Words per minute *CC	8 min	All
View: Audio Interviews: Quizzing With Clickers	Slide 20: Patrice Bain shares her experience with Clickers	5:50 min	All
Discuss	Slide 20: Handout #7 Discuss the benefits of the quiz information and analyze benefit of immediate feedback	4 min	All
View: Bell Ringers, Pyramids, and Big Ideas	Slide 21: Bonny Bowen uses bell ringers as review and to provide immediate	6:29 min	All

	feedback.		
Share	Slide 21: Use sticky notes and write one current quiz activity you use and share	6 min	All
Think & Share	Slide 22: Tool to convene school in-service session on topic Handout #3 *CC	10 min	All

"Alternate worked examples with problem-solving practices"
2nd recommended practice

Step	*Description*	*Time*	*Target Audience*
Preview	Slide 23: 2nd recommended practice: Alternate worked examples with problem-solving practices	1 min	All
Introduce Using Cloze Reading	Slide 24: By providing a worked example before each new problem to solve, students are given access to better problem-solving strategies and can develop their own strategies more effectively.	3 min	All
View: Multimedia Overview Alternating Worked Example with Practice	Slide 25: Research studies have found that giving students examples of worked out solutions before each new problem	3:53 min	All
Share & Discuss	Slide 25: Get with your left side neighbor and discuss what it means to alternate worked examples with practice.	2 min	All
View: Expert Interview "Key Concepts in Alternating Worked Examples With Practice"	Slide 26: Listen to Dr. Ken Koedinger talk about how alternating examples with practice improves students' problem-solving strategies	5:30	All
Share	Slide 26: Why alternating examples with practice is more effective than offering an example or two and a set of problems to practice.	3 min	All
Read	Slide 27: 1st key concept: Develop homework sets that ask students to alternate between reading already worked solutions and solving problems on their own.	2 min	All
Read	Slide 28: 2nd key concept: Have teachers conduct "thinkalouds" in which they explain their thinking process as they complete problems.	2 min	All
Read	Slide 29: 3rd key concept: Plan for professional development to identify the characteristics of a good example.	2 min	All
Read	Slide 30: 4th key concept: Consider incorporating online tutorials that assist students.	2 min	All

View: Slideshow: The Power of Worked Examples	Slide 31: Mike Comiskey describes how alternating between worked examples and student practice	4 min	All
Work & Share	Slide 32: Handout #8 – work through the handout – share answers then group discussion on questions	11 min	All

Connect Abstract and Concrete Representations of Concepts
3rd Recommended practice

Step	*Description*	*Time*	*Target Audience*
Preview	Slide 33: 3rd recommended practice connect abstract and concrete representations of concepts.	1 min	All
Introduce Using Cloze Reading	Slide 34: Students need to make connections between abstract and concrete.	2 min	All
View: Multimedia Overview Connecting Abstract and Concrete Representations of Concepts	Slide 35: Handout #9: Learn how this practice can help students understand difficult concepts and transfer their knowledge to new situations	5:44	All
View: Expert Interview "Using Concrete Situations to Introduce Content"	Slide 36: Dr. Bottge explains how teachers can introduce content with real-world problem scenarios to make connections with abstract concepts	5:42	All
Think/Pair/Share	Slide 36: Handout #9: Share with 3:00 partner	3 min	All
Read	Slide 37: 1st key concept: Identify the challenging concepts in your discipline and how you might demonstrate these concepts in concrete contexts	2 min	All
Read	Slide 38: 2nd key concept: graphic representations with verbal descriptions that illustrate key processes and procedures.	2 min	All
Read	Slide 39: 3rd key concept: Help students understand the benefits and limitations of concrete representations	2 min	All
Read	Slide 40: 4th key concept: Provide teachers with professional development in creating lessons that situate challenging course material in real-world problem scenarios.	2 min	All
View: Presentation "Cupcake Geology:Using Models to Explain Abstract Concepts"	Slide 41: Watch a series of videos in different content areas to give ideas of connecting abstract and concrete.	4:58 min	All
Read	Slide 41: Read through a sample lesson plan idea Handout #10 :Cupcake Geology *CC	3 min	All

View: Slideshow: Designing Hovercrafts: Anchoring Instruction in Real-Life Problems (7 slides)	Slide 42: Lyle Hendrickson's demonstration of a hovercraft activity shows how math concepts can motivate real-life problem solving.	5 min	All
View: Presentation Interview and Classroom Video: Demonstrating Thermal Layering	Slide 43: Tasia Stamos uses hands-on lab experiments and demonstrations to help her elementary students understand abstract concepts in science.	7:53 min	All
View: Video Interview: Making History Come Alive	Slide 44: Matt Moorman uses a history curriculum that incorporates pictures, graphic organizers, and visual metaphors to help students understand abstract ideas.	4:13 min	All
Share	Slide 44: Discuss the use of visuals to help this concept enhance the learning process. Partner on left	2 min	All
Group Discussion **Brainstorm**	Slide 45: Large group discussion Handout #9, refer to presentation on slides 35 & 36 Small group brainstorm	15 min	All

"Use Higher-order questions to help students build explanations"
4th recommended practice

Step	*Description*	*Time*	*Target Audience*
Preview	Slide 46: 4th recommended practice: Use higher-order questions to help students build explanations.	1 min	All
Introduce	Slide 47: When teachers ask higher-order questions and provide opportunities for students to develop deep explanations, learning is enhanced	2 min	All
Read & reflect	Slide 48: Handout #11	2 min	All
View: Multimedia Overview Using Higher-Order Questions to Help Students Build Explanations	Slide 48: Higher-order questions are contrasted with fact-based questions.	5:57	All
Discussion	Slide 48: What is a higher-order question?	2 min	All
View: Expert Interview "Key Concepts In Using Higher-Order Questions"	Slide 49: Dr. Palincsar discusses the importance of asking higher-order questions and how to build opportunities for deep explanations	6:37	All
Share	Slide 49: Get with your six o'clock appointment and share how a teacher's knowledge or lack of knowledge, can support or hinder a student's ability to work towards building explanations on a topic.	3 min	All

Discussion	Slide 49: Where in education does a teacher need to become specialized in a subject?	3 min	All
Read	Slide 50: 1st key concept: Study your discipline to better understand how scientists, historians, mathematicians, and those who study literature ask questions and provide explanations.	2 min	All
Read	Slide 51: 2nd key concept: Encourage students to dig deeper by asking them to explain their thinking in speaking and writing	2 min	All
Read	Slide 52: 3rd key concept: Create a classroom culture that encourages students to take academic risks and share ideas with the class.	2 min	All
Read	Slide 53: 4th key concept: Provide teachers with professional development about how to make question-asking and explanation-generating a natural part of the classroom environment.	2 min	All
View: Video: Opportunities for Student Explanations	Slide 54: Watch a series of videos in different content areas. In the 1st video, Jill Levine describes how the culminating project of each curriculum unit involves the creation of museum exhibits to demonstrate student learning and understandings.	4:01	All
View: Video: Essential Questions: A Schoolwide Approach	Slide 55: In the 2nd video, Jill Levine and Joyce Tatum describe how they support the use of higher-order questions through professional development that focuses on curriculum planning and effective instructional strategies.	5:18	All
Analyze and Examine	Slide 55: Handout #12 Sample Essential Questions by Grade Level Work with right hand partner	3 min	All
Discussion	Slide 55: Large group discussion Do you think this strategy will help students to have better understanding at the end of a unit?	3 min	All
View: Video interview: Response Groups: Eliciting Explanations in History (3:00)	Slide 56: In the 3rd video, Matt Moorman, a history teacher describes using higher-order questions to engage students in critical thinking and to help students to remember and internalize the information they learn	3:00	All
Share 30,15,5	Slide 56: Summarizes the information on	2 min	All

	the video		
Group Project	Slide 57: Handouts 11, 13 & 14: use this sentence starter tool to develop essential questions. *CC	15 min	All
Brainstorm & Share	Slide 58: A tool to provide in-service training on strategies for using higher-order questions to help students build explanations. Question 2 from Handout #11	8 min	All
Thumbs Up Feedback	Slide 59: Wrap Up	3 min	All
View	Slide 60: References	1 min	All